Amendments to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-11. (Canceled)

12. (Currently amended) ~~The communication device according to claim 11~~ A communication device comprising:

a transmitter,

a receiver,

the transmitter and receiver being coupled to an antenna respectively via a transmitter output and a receiver input, and

a signal corrector that is configured to reduce a transmitter leakage signal at the receiver input,

characterized in that

the signal corrector comprises

a transmitter leakage signal amplifier that is configured to selectively amplify the transmitter leakage signal, wherein

a transmitter signal reference input of the amplifier is coupled to the transmitter output,

a transmitter leakage signal input of the amplifier is coupled to the receiver input, and

a transmitter leakage signal output of the amplifier is coupled to the transmitter leakage signal input to provide a negative feedback of the transmitter leakage signal occurring at the receiver input,

characterized in that

the transmitter leakage signal amplifier comprises:

a phase splitter,

a first demodulator and a second demodulator,

a first low pass filter and a second low pass filter

a first modulator and a second modulator, and

a phase inverter,

wherein:

an input of the phase splitter is coupled to the transmitter output,

the phase splitter is configured to supply respectively in-phase and quadrature phase components of the transmitter output to reference signal inputs of the first and second demodulators, as well as to carrier signal inputs of the first and second modulators,

the first and second demodulators include:

transmitter leakage signal inputs in common with the transmitter leakage signal input of the signal corrector, and

outputs coupled respectively through the first and second low pass filters to modulating signal inputs of the first and second modulators,

an output of each of the first and second modulators is coupled in common to the receiver input and the transmitter leakage signal inputs of the first and second demodulators to form a feedback path to the receiver input, and

the phase inverter is included in the feedback path to provide the negative feedback of the transmitter leakage signal occurring at the receiver input .

13. (Previously presented) The communication device according to claim 12, characterized in that

the first and second modulators each comprise

at least one transconductance amplifier, having an output that is coupled in common to the receiver input and the transmitter leakage signal inputs of the first and second demodulators.

14. (Previously presented) The communication device according to claim 13, characterized in that

the transmitter leakage signal amplifier provides a non-linear amplification of the transmitter leakage signal, based on an amplitude of the transmitter leakage signal.

15. (Previously presented) The communication device according to claim 14, further including

a dead zone controller coupled between the first and second low pass filters and the first and second modulators that is configured to:

suppress amplitude variations of the respective output signals of the first and second lowpass filters within a range between predetermined first and second threshold levels, and

amplify the amplitude variations beyond said range.

16. (Previously presented) The communication device according to claim 15, wherein the range is based on a maximum receiver input voltage.

17. (Previously presented) The communication device according to claim 15, further including

a duplex filter having first and second stages,

the transmitter output being coupled through the first stage to the antenna,

the antenna being coupled through the second stage to the receiver input and to the transmitter signal reference input of the signal corrector.

18. (Previously presented) The communication device according to claim 17, further including

an attenuator coupled between the antenna and the transmitter signal reference input of the signal corrector.

19. (Previously presented) The communication device according to claim 18, characterized in that

the dead zone controller comprises

a splitter that is configured to split in-phase and quadrature phase components of the transmitter signal reference input into positive and negative in-phase and positive and negative quadrature phase components, the amplitude varying components thereof being supplied to control inputs of variable transconductor amplifiers included in the first and second modulators, and

the outputs of the first and second modulators are coupled through phase inverting means to the transmitter leakage output of the signal corrector.

20. (Previously presented) The communication device according to claim 18, characterized in that:

the dead zone controller comprises

first and second in-phase signal splitters and

first and second quadrature phase signal splitters that are configured to split in-phase and quadrature phase components of the transmitter signal reference input into positive and negative in-phase and positive and negative quadrature phase components,

the positive, respectively negative, components are supplied to control inputs of first variable transconductor amplifiers of the first and second modulators, respectively through first and second phase inverters to second variable transconductor amplifiers of the first and second modulators, and

outputs of the first variable transconductor amplifiers and outputs of the second variable transconductor amplifiers are coupled through third and fourth phase inverters to the transmitter leakage output of the signal corrector.

21. (Previously presented) The communication device according to claim 15, further including

an attenuator coupled between the antenna and the transmitter signal reference input of the signal corrector.

22. (Previously presented) The communication device according to claim 21, characterized in that

the dead zone controller comprises

a splitter that is configured to split in-phase and quadrature phase components of the transmitter signal reference input into positive and negative in-phase and positive and negative quadrature phase components, the amplitude varying components thereof being supplied to control inputs of variable transconductor amplifiers included in the first and second modulators, and

the outputs of the first and second modulators are coupled through phase inverting means to the transmitter leakage output of the signal corrector.

23. (Previously presented) The communication device according to claim 21, characterized in that:

the dead zone controller comprises

first and second in-phase signal splitters and

first and second quadrature phase signal splitters that are configured to split in-phase and quadrature phase components of the transmitter signal reference input into positive and negative in-phase and positive and negative quadrature phase components,

the positive, respectively negative, components are supplied to control inputs of first variable transconductor amplifiers of the first and second modulators, respectively through first and second phase inverters to second variable transconductor amplifiers of the first and second modulators, and

outputs of the first variable transconductor amplifiers and outputs of the second variable transconductor amplifiers are coupled through third and fourth phase inverters to the transmitter leakage output of the signal corrector.

24. (Previously presented) The communication device according to claim 14, further including

a duplex filter having first and second stages,

the transmitter output being coupled through the first stage to the antenna,

the antenna being coupled through the second stage to the receiver input and to the transmitter signal reference input of the signal corrector.

25. (Previously presented) The communication device according to claim 24, further including

an attenuator coupled between the antenna and the transmitter signal reference input of the signal corrector.

26. (Previously presented) The communication device according to claim 14, further including

an attenuator coupled between the antenna and the transmitter signal reference input of the signal corrector.

27. (Previously presented) The communication device according to claim 13, further including

a duplex filter having first and second stages,

the transmitter output being coupled through the first stage to the antenna,

the antenna being coupled through the second stage to the receiver input and to the transmitter signal reference input of the signal corrector.

28. (Previously presented) The communication device according to claim 27, further including

an attenuator coupled between the antenna and the transmitter signal reference input of the signal corrector.

29. (Previously presented) The communication device according to claim 13, further including

an attenuator coupled between the antenna and the transmitter signal reference input of the signal corrector.

30. (Previously presented) The communication device according to claim 12, characterized in that

the transmitter leakage signal amplifier provides a non-linear amplification of the transmitter leakage signal, based on an amplitude of the transmitter leakage signal.

31. (Previously presented) The communication device according to claim 30, further including

a dead zone controller coupled between the first and second low pass filters and the first and second modulators that is configured to:

suppress amplitude variations of the respective output signals of the first and second lowpass filters within a range between predetermined first and second threshold levels, and

amplify the amplitude variations beyond said range.

32. (Previously presented) The communication device according to claim 31, wherein the range is based on a maximum receiver input voltage.

33. (Previously presented) The communication device according to claim 32, further including

a duplex filter having first and second stages,

the transmitter output being coupled through the first stage to the antenna,

the antenna being coupled through the second stage to the receiver input and to the transmitter signal reference input of the signal corrector.

34. (Previously presented) The communication device according to claim 33, further including

an attenuator coupled between the antenna and the transmitter signal reference input of the signal corrector.

35. (Previously presented) The communication device according to claim 33, characterized in that

the dead zone controller comprises

a splitter that is configured to split in-phase and quadrature phase components of the transmitter signal reference input into positive and negative in-phase and positive and negative quadrature phase components, the amplitude varying components thereof being supplied to control inputs of variable transconductor amplifiers included in the first and second modulators, and

the outputs of the first and second modulators are coupled through phase inverting means to the transmitter leakage output of the signal corrector.

36. (Previously presented) The communication device according to claim 33, characterized in that:

the dead zone controller comprises

first and second in-phase signal splitters and

first and second quadrature phase signal splitters that are configured to split in-phase and quadrature phase components of the transmitter signal reference input into positive and negative in-phase and positive and negative quadrature phase components,

the positive, respectively negative, components are supplied to control inputs of first variable transconductor amplifiers of the first and second modulators, respectively through first and second phase inverters to second variable transconductor amplifiers of the first and second modulators, and

outputs of the first variable transconductor amplifiers and outputs of the second variable transconductor amplifiers are coupled through third and fourth phase inverters to the transmitter leakage output of the signal corrector.

37. (Previously presented) The communication device according to claim 31, further including

an attenuator coupled between the antenna and the transmitter signal reference input of the signal corrector.

38. (Previously presented) The communication device according to claim 37, characterized in that

the dead zone controller comprises

a splitter that is configured to split in-phase and quadrature phase components of the transmitter signal reference input into positive and negative in-phase and positive and negative quadrature phase components, the amplitude varying components thereof being supplied to control inputs of variable transconductor amplifiers included in the first and second modulators, and

the outputs of the first and second modulators are coupled through phase inverting means to the transmitter leakage output of the signal corrector.

39. (Previously presented) The communication device according to claim 37, characterized in that:

the dead zone controller comprises

first and second in-phase signal splitters and

first and second quadrature phase signal splitters that are configured to split in-phase and quadrature phase components of the transmitter signal reference input into positive and negative in-phase and positive and negative quadrature phase components,

the positive, respectively negative, components are supplied to control inputs of first variable transconductor amplifiers of the first and second modulators, respectively through first and second phase inverters to second variable transconductor amplifiers of the first and second modulators, and

outputs of the first variable transconductor amplifiers and outputs of the second variable transconductor amplifiers are coupled through third and fourth phase inverters to the transmitter leakage output of the signal corrector.

40. (Previously presented) The communication device according to claim 12, further including

a duplex filter having first and second stages,

the transmitter output being coupled through the first stage to the antenna,

the antenna being coupled through the second stage to the receiver input and to the transmitter signal reference input of the signal corrector.

41. (Previously presented) The communication device according to claim 40, further including

an attenuator coupled between the antenna and the transmitter signal reference input of the signal corrector.

42. (Previously presented) The communication device according to claim 12, further including

an attenuator coupled between the antenna and the transmitter signal reference input of the signal corrector.

43. (Currently amended) The communication device according to claim ~~41~~ 42, characterized in that

the transmitter leakage signal amplifier provides a non-linear amplification of the transmitter leakage signal, based on an amplitude of the transmitter leakage signal.

44. (Currently amended) The communication device according to claim ~~43~~ 30, wherein

the transmitter leakage signal amplifier is configured to:

suppress amplitude variations of the transmitter leakage signal within a range between predetermined first and second threshold levels, and

amplify the amplitude variations beyond said range.

45. (Previously presented) The communication device according to claim 44, further including

a duplex filter having first and second stages,

the transmitter output being coupled through the first stage to the antenna,

the antenna being coupled through the second stage to the receiver input and to the transmitter signal reference input of the signal corrector.

46. (Previously presented) The communication device according to claim 44, further including

an attenuator coupled between the antenna and the transmitter signal reference input of the signal corrector.

47. (Currently amended) The communication device according to claim ~~11~~ 30, further including

a duplex filter having first and second stages,

the transmitter output being coupled through the first stage to the antenna,

the antenna being coupled through the second stage to the receiver input and to the transmitter signal reference input of the signal corrector.

48. (Previously presented) The communication device according to claim 47, further including

an attenuator coupled between the antenna and the transmitter signal reference input of the signal corrector.

49. (Currently amended) The communication device according to claim ~~11~~ 15, further including

an attenuator coupled between the antenna and the transmitter signal reference input of the signal corrector.

50. (Previously presented) The communication device according to claim 17, characterized in that

the dead zone controller comprises

a splitter that is configured to split in-phase and quadrature phase components of the transmitter signal reference input into positive and negative in-phase and positive and negative quadrature phase components, the amplitude varying components thereof being supplied to control inputs of variable transconductor amplifiers included in the first and second modulators, and

the outputs of the first and second modulators are coupled through phase inverting means to the transmitter leakage output of the signal corrector.

51. (Previously presented) The communication device according to claim 17, characterized in that:

the dead zone controller comprises

first and second in-phase signal splitters and

first and second quadrature phase signal splitters that are configured to split in-phase and quadrature phase components of the transmitter signal reference input into positive and negative in-phase and positive and negative quadrature phase components,

the positive, respectively negative, components are supplied to control inputs of first variable transconductor amplifiers of the first and second modulators, respectively through first and second phase inverters to second variable transconductor amplifiers of the first and second modulators, and

outputs of the first variable transconductor amplifiers and outputs of the second variable transconductor amplifiers are coupled through third and fourth phase inverters to the transmitter leakage output of the signal corrector.